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Grain and Potato Production in 19th-century Estonia

*Juhan Kahk**

Abstract: This article is based on the annual reports of the governors of Estland (Northern Estonia) and Livland. Although the statistical correctness of the information is questionable, it can be used to find out relative tendencies. Especially we are interested in the similarities and differences involved in the economic development of the large estates of Baltic-German landowners.

This article is based on the annual reports of the governors of Estland (Northern Estonia) and Livland (the southern counties of Estonia and the island of Saaremaa). Although the statistical correctness of the information is somewhat questionable, as it reflects the level of administrative practice at the time, according to the opinion of specialists in agrarian history, it can be used to find out relative tendencies.¹ In this case we are not so much interested in the absolute values of agricultural production as in the similarities and differences involved in the economic development of the large estates of Baltic-German landowners versus those of Estonian peasants and between the different geographical regions in the area.

As we can see from Figures 1 and 2, the amount of winter grain sown on the fields increased insignificantly in the 19th century while the yields - strongly fluctuating as elsewhere in Europe in these times - increased to some degree in the second half of the century (especially in Southern Estonia). The quite significant progress in agriculture revealed itself in the explosive increase of yields of potatoes beginning from the 1860s (Figures 3 and 4). With the Peasant Laws of 1849, 1856, and 1860, radical changes took place in the Baltic countries - the peasants got real opportunities to buy their lands (although for very high prices). In the 1870-80s the peasants began to buy their lands (in perpetual property«) very intensively and went over from »open field« villages to

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¹ Kovalcenko, I.D., *Russkoe krestjanstvo v pervoi polo vine XIX veka*, Moskva 1967; Nifontov, A.S., *Zernovoe proizvodstvo Rossii vo vtoroi polovine XIX veka. Po materialam ežegodnoi statistiki urožaev evropeiskoi Rossii*, Moskva 1974; Kahk, J., *Die Krise der feudalen Landwirtschaft in Estland (Das zweite Viertel des 19. Jahrhunderts)*, Tallinn, 1969.

work on separated and united farms. The result of the agrarian reforms achieved thanks to the tenacious struggle of peasants and efforts of the more far-sighted representatives of the nobility was a quite remarkable increase of agrarian production - grain production remained on the same level, but the production of potatoes increased seven times by the end of the century compared with the level of the 1840-60s in Northern Estonia and five times in Southern Estonia.

As we can see from Figures 5 and 6, the increase took place simultaneously on the fields of landlords and peasants - beginning in 1872 in Southern Estonia and in 1875 in Northern Estonia, we can see a sudden and significant increase in potato yields. In Southern Estonia the area under potato cultivation increased on peasant fields parallel to the same process on the estate fields at the beginning, but by the end of the century peasants already cultivated more potatoes than landlords. In the second half of the 19th century the amount of yields of winter grain increased on estate and peasant fields similarly (1.0-1.3-fold). The amount of the potato yield increased at the beginning of the second half of the century on estate fields as well as on peasant fields more than 3-fold out in the last two decades of the century the increase was faster on peasant fields than on the estates (1.5 times faster in Northern and 1.2 times faster in Southern Estonia). The peasant economy reacted to the changing market situation more vigorously than the economy of the landlords. As a result, the amount of winter grain and potato crop increased 5-9-fold in 30-40 years, first of all, thanks to the explosive expansion of potato cultivation on the fields of Estonia.

The data of the governor reports also provide evidence that up to the 1880s the yields on peasant fields were higher than on the estate fields. By the end of the century, when expensive fertilizers and machines played a more significant role in the modernized agriculture, the landlords' economies surpassed the peasants'. At the end of the 19th century the yields in Estonia were significantly higher than in the neighbouring Russian guberniyas where soil and climatic conditions were quite similar. In the 1880s the average yield of winter rye in Southern Estonia was 7.6-fold on estate fields, 11.7-fold on peasant fields, the respective figures for the neighbouring Pskov guberniya were 4.8 and 4.8.

In the process of modernization, the estates and the peasant households displayed significant regional differences. The most rapid and intensive changes took place in Southern Estonia in the county of Viljandimaa. In this county, traditionally regarded as the richest and most developed part of Estonia, radical changes took place in field structure. The amount of winter rye sown in 1854 compared with the amount in 1849 diminished 7-fold on estate fields and 2-fold on peasant fields; at the same time the amount of potatoes planted on estate fields grew 1.6-fold and on peasant fields 1.7-fold. In 1881-82 the regular crop rotation was in use in all peasant households of Viljandimaa county; in the neighbouring counties not more than 60% of peasants had gone over to crop rotation.² According to data collected by the Livonian Nobility in 1871,

² Kahk, J., Die Krise der feudalen Landwirtschaft in Estland, pp. 48, 49.

more than 50% of peasant farmers had already begun to buy their households in perpetual property in 9 parishes - 5 of them belonged to Viljandimaa county and 4 of them belonged to the other 4 counties of the Estonian district.¹ It all demonstrates clearly how strongly all the processes of transition to modern capitalist agriculture were intertwined - the peasants who wished to buy their farms had to cultivate new and more marketable products, while, at the same time, the landlords who had abolished forced (corvée) labour also had to re-structure their fields.

The figures demonstrate that quite strong similar tendencies existed in the development of agricultural production in both the estates and the peasant households. To study the similarities and differences in the agricultural production of the peasant households and the estates in different counties of Estonia more precisely, we use correlation analysis dividing all information at our disposal into two or three successive periods as shown in the following matrixes. Here we can clearly observe that strong correlations are quite rare for the 1840-50s, more numerous for the 1860-1870s, and once again relatively rare at the end of the century. The matrixes demonstrate that in the 1870s in Northern Estonia the yields of winter grain and potatoes developed relatively similarly on estate fields of all counties and also on the peasant fields of the more fertile counties of Harjumaa and Järvamaa situated nearer to the capital Tallinn. But at the end of the century, the correlations are significantly rarer and weaker - in the modernized agriculture the individual features of competitors gain in significance. The same tendency can be seen in Southern Estonia - the correlations are relatively rare in the 1840-50s and significantly stronger in the 1860-70s. By the end of the century, the agricultural production developed quite similarly everywhere on estate fields in Southern Estonia and similar features appear also in the development of the more prosperous farms of Viljandimaa county.

¹ Central Historical Archives of Latvia in Riga, collection 214, roll 1, document 4973.

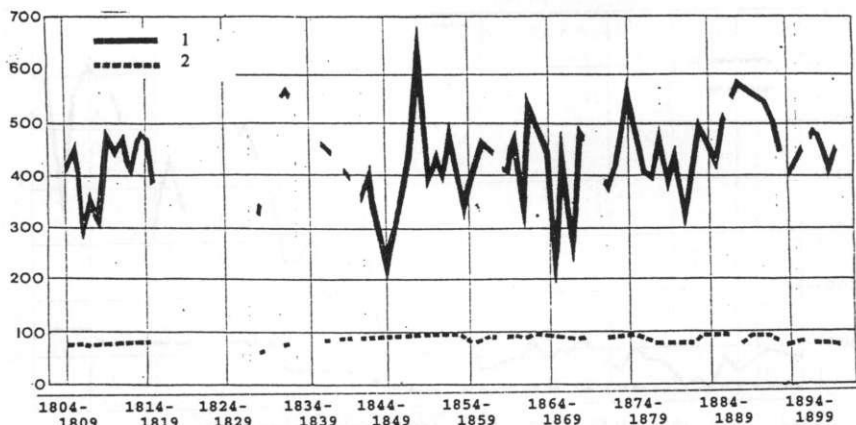


Figure 1: The sowing and yield of winter grain in Northern Estonia 1804-1900 in thousands of tchetverts (1 tchetvert = 209.9 l = 110-130 kg of grain)
1 - yield 2 - amount of snow grain

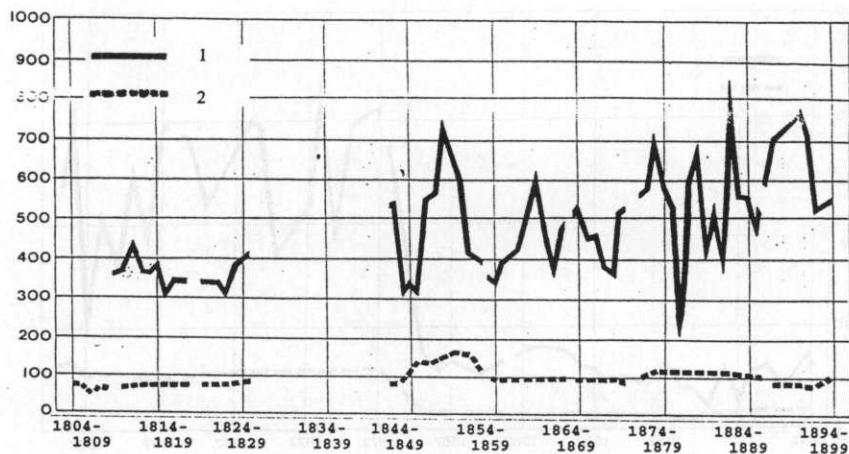


Figure 2: The sowing and yield of winter grain in Southern Estonia 1804-1900 in thousands of tchetverts
1 - yield 2 - amount of snow grain

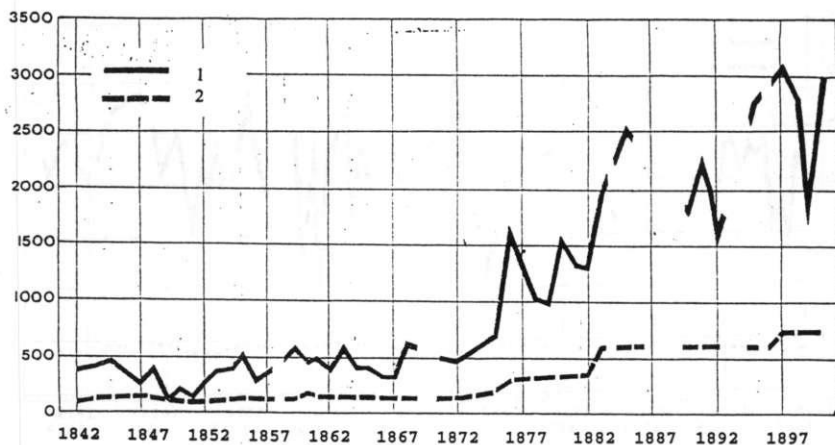


Figure 3: Potato planting and yield in Northern Estonia 1842-1900 in thousands of tchetverts
1 - yield 2 - amount of planted potatoes

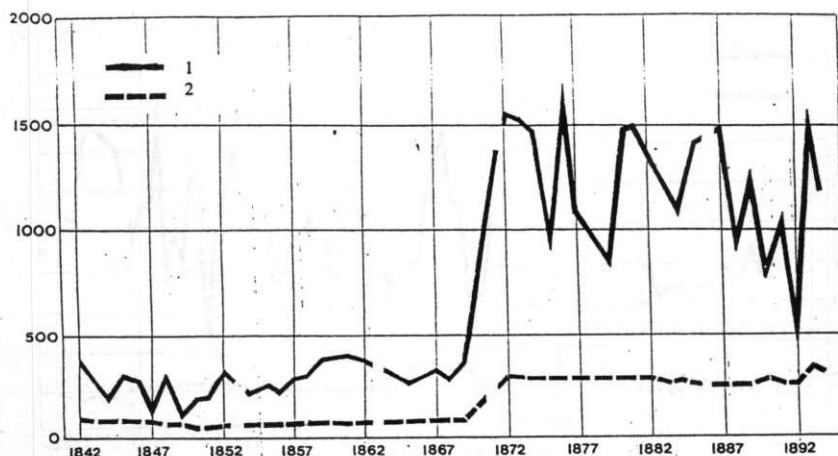


Figure 4: Potato planting and yield in Southern Estonia 1842-1900 in thousands of tchetverts
1 - yield 2 - amount of planted potatoes

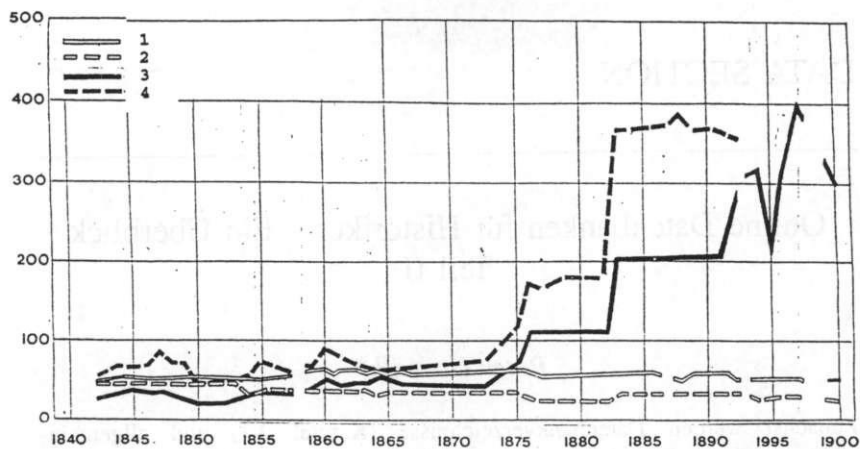


Figure 5: The sowing of winter grain and planting of potatoes on estate and peasant fields in Northern Estonia 1842-1900 in thousands of tchetverts

- 1 - winter grain on peasant fields
- 2 - winter grain on estate fields
- 3 - potato on peasant fields
- 4 - potato on estate fields

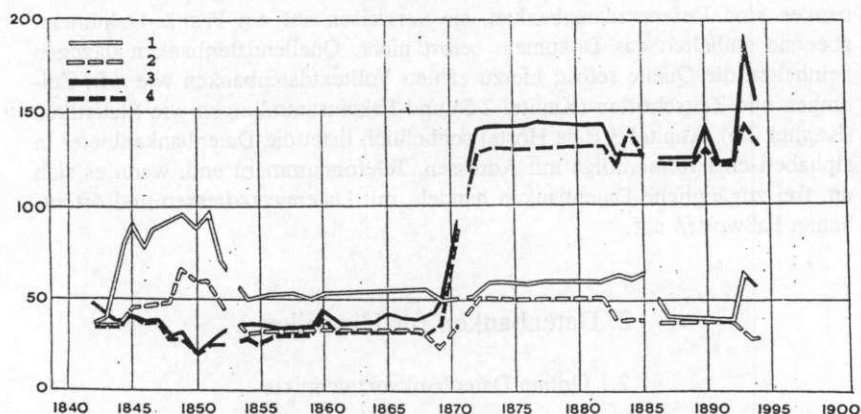


Figure 6: The sowing of winter grain and planting of potatoes on estate and peasant fields in Southern Estonia 1842-1900 in thousands of tchetverts

- 1 - winter grain on peasant fields
- 2 - winter grain on estate fields
- 3 - potato on peasant fields
- 4 - potato on estate fields